

age - 0202
Median and Mode

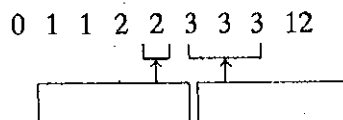
Lesson 2-2

Lesson Objective To find and analyze the median and mode of a data set	NAEP 2005 Strand: Data Analysis and Probability Topic: Characteristics of Data Sets Local Standards: _____
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Vocabulary

The median is _____

The mode is _____



Example

- ① **Finding the Median** A bird-watcher keeps a count of the number of birds she sees each week. The results are 23, 35, 27, 55, 41, 23, 45, and 69. Find the median number of birds.

23, 23, 27, 35, 41, 45, 55, 69 ← Order the data.

23, 23, 27, 35, 41, 45, 55, 69 ← Since there are 8 items (an even number), use the _____ values.

$$\frac{\boxed{} + \boxed{}}{2} = \frac{\boxed{}}{2} = \boxed{} \leftarrow \text{Find the mean of } \boxed{} \text{ and } \boxed{}.$$

The median number of birds is $\boxed{}$.

Quick Check

1. Weekly sales of comics at a store are 39, 19, 28, 9, 32, 35, and 17 comics. What is the median number of comics sold?

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Examples

- ② **Finding the Mode** The list shows the favorite colors of 12 children.

Find the mode.

blue, red, blue, yellow, yellow, blue, red, blue, yellow, blue, red, yellow

Group the data.

blue, blue, blue, blue, blue

red, red, red

yellow, yellow, yellow, yellow

occurs the most. It is the .

- ③ **Analyzing Data** The ages of everyone at a family reunion are listed. Find the mean, median, and mode. Which one best describes the typical age of the family members at the reunion?

22, 100, 26, 4, 30, 33, 21, 44, 47, 83, 47

mean $\frac{22 + 100 + 26 + 4 + 30 + 33 + 21 + 44 + 47 + 83 + 47}{\boxed{}} = \frac{\boxed{}}{\boxed{}} \approx \boxed{}$

median 4, 21, 22, 26, 30, 33, 44, 47, 47, 83, 100:

mode

The and the are only close to some of the data points.

The mean best describes the typical age of the family members at the reunion.

Quick Check

2. In Example 2, how many children would have to switch from yellow to red as their favorite color for red to be the only mode?

3. The top five women's 1-meter diving scores are 288.75, 261.83, 254.85, 254.1, and 246.8. Does the mean, median, or mode best describe these data? Explain.

Homework Exercises

Show Your Work!	Corrections/Comments/Explanations
<p data-bbox="110 294 714 331">(1) Find the median and mode(s) of this data set.</p> <p data-bbox="341 367 600 405">1, 1, 1, 2, 3, 4, 5, 5, 5</p>	
<p data-bbox="110 745 820 819">(2) Find the median of this data set. Remember to order the numbers first.</p> <p data-bbox="357 850 592 888">8, 42, 13, 7, 50, 91</p>	
<p data-bbox="110 1197 560 1234">(3) Find the mode of each data set:</p> <p data-bbox="170 1270 479 1308">a) 15, 12, 17, 13, 20, 19</p> <p data-bbox="170 1375 519 1413">b) sad, glad, glad, mad, sad</p>	
<p data-bbox="110 1491 820 1533">(4) Find the mean, median and mode of this set of data.</p> <p data-bbox="357 1564 625 1602">13.5, 15, 13.5, 11, 13</p>	

(5) Challenge The **median** of four numbers is 48. Three of the numbers are 42, 51 and 52. What is the other number?

(6) Review (1-1) Write 7,000,000, 215,000 in words.

(7) Review (1-4) Write 1,715.0015 in words.